



## **DEPARTMENT OF COMMERCE**

### **Bureau of Industry and Security**

#### **15 CFR Parts 740 and 774**

**[Docket No. 230926-0234]**

**RIN 0694–AI66**

#### **Export Administration Regulations for Missile Technology Items: 2018, 2019, and 2021**

#### **Missile Technology Control Regime Plenary Agreements; and License Exception Eligibility**

**AGENCY:** Bureau of Industry and Security, Commerce.

**ACTION:** Final rule.

**SUMMARY:** The Bureau of Industry and Security (BIS) is amending the Export Administration Regulations (EAR) to reflect changes to the Missile Technology Control Regime (MTCR) Annex that were agreed to by MTCR member countries at the Technical Experts Meetings (TEMs) in March and November 2018, May and October 2019, and October 2021. This rule also expands the eligibility for the use of license exceptions under the EAR for MT-controlled items. These changes to license exception eligibility are also being made as part of a broader effort announced today that will liberalize several categories of export licensing requirements and the availability of export license exceptions for key allied and partner countries, as well as for members of certain multilateral export control regimes.

**DATES:** This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**FOR FURTHER INFORMATION CONTACT:** Sharon Bragonje, Nuclear and Missile Technology Controls Division, Bureau of Industry and Security, Phone: (202) 482–0434; E-mail: [sharon.bragonje@bis.doc.gov](mailto:sharon.bragonje@bis.doc.gov)

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

The Missile Technology Control Regime (MTCR or Regime) is an export control arrangement among 35 nations, including most of the world's suppliers of advanced missiles and missile-related equipment, materials, software, and technology. The regime establishes a common list of controlled items (the Annex) and a common export control policy (the Guidelines) that member countries implement in accordance with their national export controls. The MTCR seeks to limit the risk of proliferation of weapons of mass destruction by controlling exports of goods and technologies that could make a contribution to delivery systems (other than manned aircraft) for such weapons.

In 1993, the MTCR's original focus on missiles for nuclear weapons delivery was expanded to include the proliferation of missiles for the delivery of all types of weapons of mass destruction (WMD), *i.e.*, nuclear, chemical, and biological weapons. Such proliferation has been identified as a threat to international peace and security. One way to address this threat is to maintain vigilance over the transfer of missile equipment, material, and related technologies usable for systems capable of delivering WMD. MTCR members voluntarily pledge to adopt the Regime's export Guidelines and to restrict the export of items contained in the Regime's Annex. The Regime's Guidelines are implemented through the national export control laws, regulations and policies of the regime members.

#### **Amendments to the Export Administration Regulations (EAR)**

This final rule, as further described in section A of this preamble, revises six ECCNs under the EAR to reflect changes to the MTCR Annex agreed to at the March 2018 Technical Experts Meeting (TEM) in Reykjavik, Iceland; November 2018 TEM in Basel, Switzerland; May 2019 TEM in Berlin, Germany; October 2019 TEM in Auckland, New Zealand; and October 2021 TEM in Sochi, Russian Federation. References are provided below for the MTCR Annex changes agreed to at the meetings that correspond to the EAR revisions described below. These changes are primarily editorial corrections to these ECCNs for consistency with the MTCR Annex. This rule also makes changes to the Commerce Control List (CCL) (supplement no. 1 to

part 774 of the EAR) to conform with the MTCR Annex. All of the changes in this final rule align the MT controls on the CCL with the MTCR Annex. In the discussion below, BIS identifies the origin of each change in the regulatory text of this final rule by using one of the following parenthetical phrases: (Reykjavik 2018 TEM), (Basel 2018 TEM), (Berlin 2019 TEM), (Auckland 2019 TEM), (Sochi 2021 TEM), or (Changes to Align with MTCR Annex).

This final rule expands the eligibility of license exceptions for MT-controlled items, as further described in section B, by amending the EAR to expand the eligibility for the use of four license exceptions under the EAR for MT-controlled items and to add one new license exception authorization under an existing license exception. In addition, this rule revises the general restriction on the use of license exceptions to ensure that the limited set of additional license exception authorizations specified are not available for destinations of concern for missile technology reasons or that are subject to a U.S. arms embargo and makes conforming changes where needed to license exceptions to ensure that only certain license exceptions or portions of license exceptions will be available for MT-controlled items. These changes to license exception eligibility for MT-controlled items will better harmonize the availability of license exceptions for such items with the availability of license exceptions that are available for other items of similar sensitivity under the EAR. Because of the terms and conditions of existing license exceptions there will only be a limited number of license exceptions or portions of those license exceptions that will be available for MT-controlled items.

Making these limited additional license exceptions or portions of those license exceptions available will ease the burden on exporters, reexporters, and transferors and allow for BIS, as well as the other agencies that review BIS licenses, to focus its license reviews on transactions that warrant individual reviews through the license review process.

The changes with this rule to license exception eligibility and two other ally and partner rules published today are part of a broad effort to liberalize controls for allies and partner countries under the EAR (15 CFR parts 730-774). Together, these rules will ease several categories of

export licensing requirements and increase the availability of export license exceptions for key allied and partner countries, as well as members of certain multilateral export control regimes.

**A. Amendments to the Commerce Control List (CCL) to reflect changes to the MTCR**

**Annex**

This final rule amends the CCL to reflect changes to the MTCR Annex by amending six ECCNs, as follows:

ECCN 1C111. This final rule amends ECCN 1C111 by adding a new “items” paragraph e in the List of Items Controlled section to control Dimethylaminoethylazide (DMAZ) (CAS 86147-04-8) as a Hydrazine replacement fuel, and [Reserves] “items” paragraph e.2 to conform to *Federal Register* requirements for the addition of “items” paragraph e.1 (Changes to Align with MTCR Annex). DMAZ was added to the MTCR Annex in 2014. At the time, it was not added to the United States Munitions List (USML) or the CCL. This change to ECCN 1C111 corrects that oversight, ensuring that DMAZ will be appropriately controlled under the EAR and consistent with U.S. Government commitments to the MTCR. This is consistent with the 2014 rules that transitioned hydrazine and its derivatives to the CCL. These changes are expected to result in an increase of three to five license applications received annually by BIS, due to the low volume of such items exported.

In addition, BIS takes this opportunity to correct the ITAR citation regarding ferrocene derivatives controlled under Category V(f)(4) in paragraph (2) of the Related Controls paragraph in the List of Items Controlled section. Ferrocene derivatives were moved from paragraph (f)(3) to (f)(4) by Department of State Export Control Reform (ECR) rule 79 FR 34, Jan. 2, 2014, but were not included in the companion BIS rule, 79 FR 264, Jan. 2, 2014. To preclude the need for similar amendments in the future, the citation is limited to the higher level USML Category. A corresponding revision is made in reference to Inhibited Red Fuming Nitric Acid in Related Controls paragraph (5).

ECCN 2A101. This final rule amends ECCN 2A101 by revising the heading to add the word “of” after the phrase “having all,” so this part of the heading will now read as “having all of the following characteristics.” This is an editorial correction for consistency with the MTCR Annex that does not substantively change the scope of ECCN 2A101 (MTCR Annex Change, Category II: Item 3.A.7., Reykjavik 2018 TEM). These changes are not expected to have any impact on the number of license applications received by BIS.

ECCN 2B119. This final rule amends ECCN 2B119 by revising “items” paragraph a in the List of Items Controlled section. In “items” paragraph a, this final rule adds the word “of” after the phrase “having all,” so the control parameter will now read as “balancing machines having all of the following characteristics.” This is an editorial correction for consistency with the MTCR Annex that does not substantively change the scope of ECCN 2B119 (MTCR Annex Change, Category II: Item 9.B.2., Reykjavik 2018 TEM). This change is not expected to have any impact on the number of license applications received by BIS.

ECCN 6A107. This final rule amends ECCN 6A107 by revising “items” paragraphs a, in the List of Items Controlled section. In “items” paragraphs a, this final rule adds the word “of” after the phrase “having all” and adds the word “characteristics” after the word “following,” so the control parameter will now read as “Gravity meters having all of the following characteristics.” This is an editorial correction for consistency with the MTCR Annex that does not substantively change the scope of the ECCN (MTCR Annex Change, Category II: Item 12.A.3., Reykjavik 2018 TEM). These changes are not expected to have any impact on the number of license applications received by BIS.

ECCN 9A101. This final rule amends ECCN 9A101 by revising “items” paragraphs a.2 in the List of Items Controlled section to remove the parenthetical phrase “at maximum continuous power at sea level static conditions using the ICAO standard atmosphere.” This final rule also redesignates Technical notes 2 and 3 as Technical notes 3 and 4, respectively, and adds a new Technical Note 2 in the List of Items Controlled section (MTCR Annex Change, Category

II: Item 3.A.1., Berlin 2019 TEM). This final rule adds new Technical note 2 to specify that specific fuel consumption is determined at maximum continuous thrust for engine type uninstalled at sea level static conditions using the ICAO standard atmosphere. This change is a correction on how specific fuel consumption is determined – using thrust rather than power. Additionally, the parenthetical phrase in “items” paragraph a.2 is being moved from a parenthetical in the control text to a technical note, where it better belongs in the context of ECCN 9A101. This is a clarification and will not change any scope of control. These changes are not expected to have any impact on the number of license applications received by BIS.

ECCN 9E515. This final rule amends ECCN 9E515 by revising the “MT” paragraph in the table in the License Requirements section to add a reference to ECCN 9A515.h to specify the MT control applies to technology for items in ECCN 9A515.h (Change to Align with MTCR Annex). This addition is to correct an oversight to ensure the MT technology control appropriately extends to all the intended MT commodities. The technology for ECCN 9A515.h., which has an MT control, should be controlled under ECCN 9E515. This correction will align the technology control in ECCN 9E515 with 20.A.1.b.2./20.E.1. in the MTCR Annex. These changes are not expected to have any impact on the number of license applications received by BIS.

#### **B. Changes to license exception eligibility for MT-controlled items.**

This final rule makes changes to the EAR for license exception eligibility for MT-controlled items. These changes consist of the following: (1) revising the general restriction on the use of license exceptions for MT-controlled items in § 740.2(a)(5); (2) revising the terms and conditions of four license exceptions: License Exceptions TMP under § 740.9(b)(1)(i) and (b)(2)(ii)(C), GOV under § 740.11 introductory text, TSU under § 740.2(d)(2) to add additional requirements or exclusions for items controlled for MT items; and (3) adding a new authorization to existing License Exception AVS under § 740.15(b)(2), under a new paragraph (b)(2)(ii).

BIS emphasizes that it is important to understand that although this final rule revises the general restriction on the use of license exceptions for MT-controlled items to make it more narrowly focused, that the majority of EAR license exceptions will still not be available because the terms and conditions of those license exceptions do not allow for MT-controlled items, *e.g.*, License Exception GBS, which is only available to overcome a license requirement for items that are only controlled for national security (NS) reasons.

BIS identifies here the thirteen License Exceptions that are *not* available for items that are MT controlled:

- § 740.3 Shipments of limited value (LVS);
- § 740.4 Shipments to Country Group B countries (GBS);
- § 740.6 Technology and software under restriction (TSR);
- § 740.7 Computers (APP);
- § 740.8 Notified Advanced Computing (NAC);
- § 740.12 Gift parcels and humanitarian donations (GFT);
- § 740.14 Baggage (BAG);
- § 740.17 Encryption commodities, software, and technology (ENC);
- § 740.18 Agricultural commodities (AGR);
- § 740.19 Consumer Communications Devices (CCD);
- § 740.20 License Exception Strategic Trade Authorization (STA);
- § 740.21 Support for the Cuban People (SCP); *and*
- § 740.22 Authorized Cybersecurity Exports (ACE).

BIS identifies here the six license exceptions, or portions of those license exceptions, that are available for items that are MT controlled (only the referenced paragraphs will be eligible for MT-controlled items) for any destination other than destinations identified under Country Groups D:4 or D:5 in supplement no. 1 to part 740:

- § 740.9 Temporary imports, exports, reexports, and transfers (in-country) (TMP) for paragraphs (a)(1), (a)(3) through (8) and (a)(10), (b)(1) through (b)(3), and Notes 2, 3, and 4 to paragraph (b), excluding any commodity controlled under ECCN 9A012 that is “capable of” delivering at least 500 kilograms payload to a range of at least 300 kilometers;
- § 740.10 License Exception Servicing and replacement of parts and equipment (RPL) for paragraphs (a) and (b);
- § 740.11 Governments, international organizations, international inspections under the Chemical Weapons Convention, and the International Space Station (GOV) for paragraph (b)(2) (as described below under section B.2.ii, this final rule adds a new exclusion to the introductory text of License Exception GOV to exclude all other paragraphs under this license exception for MT-controlled items);
- § 740.13 Technology and software—unrestricted (TSU) for paragraphs (a), (b), (c), and (g) (as described below under section B.2.iii, this final rule adds a new exclusion to exclude MT controlled software from paragraph (d));
- § 740.15 Aircraft, vessels and spacecraft (AVS) for paragraphs (b)(1), (b)(2) (including the new authorization this final rule adds to paragraph (b)(2)(ii) (as described below under section B.3 of this final rule)), (b)(3), (b)(4), (c)(1), (c)(2), (e), and (f); *and*
- § 740.16 Additional permissive reexports (APR) for paragraphs (c), (d), (e), and (f).

BIS provides the two lists of license exceptions above to assist with public understanding on the scope and impact of these license exception changes in this final rule for MT-controlled items. BIS notes here that in order to use any EAR license exception at the time of export, reexport, or transfer (in-country), the exporter, reexporter, or transferor must review and make a determination that they meet all of the applicable requirements of the license exception to be



used as the authorization and that the export, reexport, or transfer (in-country) is not otherwise restricted under any of the general restrictions under § 740.2.

These changes for license exception eligibility for MT-controlled items described under section B of this final rule are expected to result in a reduction of 400 license applications per year received by BIS.

***1. Revising the general restriction on the use of license exceptions for MT-controlled items to allow the use of portions of additional license exceptions***

In § 740.2 Restrictions on all License Exceptions, this final rule revises paragraph (a)(5) to make the general restriction on the use of license exceptions for MT-controlled items to allow the use of portions of additional license exceptions. Prior to this final rule, this provision restricted the use of all EAR license exceptions for MT-controlled items, except for the limited number of ECCNs identified in paragraphs (a)(5)(i) and (ii) for the specified license exceptions or portions of those license exceptions (*i.e.*, when MT-controlled items identified in paragraph (a)(5)(i) are exported as part of a spacecraft, manned aircraft, land vehicle or marine vehicle or in quantities appropriate for replacement parts for such applications under § 740.9(a)(4) (License Exception TMP for kits consisting of replacement parts), § 740.10 (License Exception RPL), § 740.13 (License Exception TSU), or § 740.15(b) (License Exception AVS for equipment and spare parts for permanent use on a vessel, aircraft or spacecraft; or for ECCNs 2A001 or 2A101 identified in paragraph (a)(5)(ii) are exported under § 740.9(a)(4) (License Exception TMP) or § 740.10 (License Exception RPL) as one-for-one replacement for equipment previously legally exported, reexported, or transferred (in-country)).

The restriction under paragraph (a)(5) was originally included in the EAR to reflect a statutory restriction in the Export Administration Act of 1979 (EAA), which was repealed in 2018. The limited license exceptions previously available were in accordance with provisions of the MTCR Annex that stipulate that controls do not extend to certain items for use in manned aircraft or other non-missile applications. The restriction under paragraph (a)(5) had some

effects that are inconsistent with current national security and foreign policy interests. For example, the export of an MT-controlled item to the U.S. Department of Defense for its own use, prior to this final rule, would have required the submission of a BIS license application. BIS is also aware that other MTCR member countries, as permissible under their own national discretion in implementing their MTCR commitments, allow in certain cases for the use of authorizations for certain MT Annex items that would be equivalent to EAR license exceptions, *e.g.*, for trade of MTCR Annex items from the EU or UK to certain other countries, including the United States.

This restriction on the use of license exceptions for MT-controlled items was not included in ECRA. Because there is no longer a statutory restriction and for policy reasons such a general restriction is no longer warranted (*e.g.*, some of the examples referenced in the preceding paragraph of instances in which license exception eligibility for MT items would advance U.S. national security and foreign policy interests), this final rule revises the general restriction on the use of license exceptions for MT-controlled items to allow the use of portions of additional license exceptions. This change will better harmonize the availability of license exceptions for MT-controlled items under the EAR with those available for other EAR items of similar sensitivity and advance U.S. national security and foreign policy interests. BIS considered completely removing the general restriction, but took into account that exporters, reexporters, and transferors were already familiar with the general restriction placement in the EAR and that because many license exceptions, based on the other terms and conditions of those license exceptions would not be eligible for MT-controlled items regardless of whether there was a general restriction, BIS determined it would be easier to identify an exhaustive, positive list of license exceptions and portions of license exceptions that will be available under the EAR for MT-controlled items to overcome the general restriction instead of making exporter, reexporters, and transferors review the terms and conditions of each of the EAR license exceptions to make those determinations.

The revision of the general restriction on the use of license exceptions results in only limited availability of additional license exceptions for MT-controlled items, as specified above under section B introductory text.

In order to implement this change, this final rule revises § 740.2(a)(5)(i) to specify no license exceptions may be used for MT-controlled items and then specifies under new paragraphs (a)(5)(i)(A) through (G) the license exceptions or other license exceptions that will be available for MT-controlled items to destinations other than those identified in Country Groups D:4 or D:5 (see supplement no. 1 to part 740 of the EAR). The purpose of this revision is to limit the expanded license exception eligibility this rule adds to only those destinations that are not of concern for missile technology reasons specified under Country Group D:4 and not subject to a U.S. arms embargo. This final rule will retain the status quo on the license exception restrictions on destinations identified under Country Groups D:4 or D:5. However, to ensure that the very limited license exception eligibility under § 740.2(a)(5)(i) and (ii) that previously was available for all destinations, including those identified under Country Group D:4 or D:5, provided the license exception was not excluded under the respective license exceptions under part 740 or the respective embargoes or sanctions sections under part 746, this final rule revises paragraph (a)(5)(ii) to specify that the ECCNs identified under paragraphs (a)(5)(i) and (ii) prior to this final rule are still available for destinations identified in Country Groups D:4 or D:5, provided the terms and conditions in parts 740 and 746 as applicable are met and none of the part 744 end-use and end-user controls are applicable.

***2. Revising the terms and conditions of three license exceptions to account for the new eligibility of MT-controlled items***

***i. License Exception TMP***

In § 740.9(a) Temporary imports, exports, reexports, and transfers (in-country) (TMP), this final rule revises the introductory text of paragraphs (a) and (b) to specify that these two paragraphs do not authorize any export, reexport, or transfer (in-country) of a commodity

controlled under ECCN 9A012 that is “capable of” delivering at least 500 kilograms payload to a range of at least 300 kilometers. This final rule revises the first sentence of paragraph (a)(1), which authorizes exports or certain tools of trade to specify MT controlled commodities or software are not eligible for Country Groups D:4 and D:5, which is also addressed under the restriction this rule adds to § 740.2(a)(5)(ii), but as an additional reminder this rule includes the additional restriction. This final rule under paragraph (b)(1), which authorizes the export of certain items moving in transit through the United States, adds an exclusion for items controlled for MT reasons when the export is to a Country Group D:4 country in supplement no. 1 to part 740. The exclusion under paragraph (b)(1)(i) had already applied to national security (NS) reasons, nuclear proliferation (NP) reasons, and chemical and biological weapons (CB) when the export was to a country of concern for NS, NP, or CB under Country Groups D:1, D:2, or D:3, respectively. Because MT-controlled items under the changes in this final rule are now eligible for this paragraph (b)(1) authorization, the same type of exclusion under paragraph (b)(1)(i) is needed for items controlled for MT reasons when the export is to a destination of concern for missile technology, destinations under Country Group D:4.

This final rule also revises paragraph (b)(2) (Items imported for marketing, or for display at U.S. exhibitions or trade fair), to revise the exclusion under paragraph (b)(2)(ii)(C), to add the same type of exclusion that this final rule adds to paragraph (b)(1)(i), for items controlled for MT reasons to not be allowed to be exported under this paragraph (b)(2)(ii)(C) authorization when the export is to a destination in Country Group D:4.

## ***ii. License Exception GOV***

In § 740.11 Governments, international organizations, international inspections under the Chemical Weapons Convention, and the International Space Station (GOV), this final rule adds one sentence at the end of the introductory text of the section to specify that for items controlled for MT reasons that they are only eligible for transactions described in paragraphs (b)(2) (United

States Government) of this section. No other authorizing paragraphs under License Exception GOV will be eligible for items controlled for MT reasons.

**iii. *License Exception TSU***

In § 740.13 Technology and software—unrestricted (TSU), this final rule revises paragraph (d) (General Software Note: mass market software) by adding one sentence to the end of the exclusions under paragraph (d)(2) to specify that the paragraph (d) authorization is not available for any software that is controlled for missile technology (MT) reasons. Because of the terms that must be met in order to use § 740.13(d) prior to this final rule, it is unlikely that software controlled for MT reasons would be eligible for this authorization, but to make it explicit that software controlled for MT reasons is not eligible under paragraph (d) under any case, this final rule specifies that in the paragraph (d)(2) exclusions.

**3. *Adding a new authorization to existing License Exception AVS for ECCNs 7A101, 7A102, and 7A103.***

In § 740.15 Aircraft, vessels and spacecraft (AVS), this final rule revises paragraph (b)(2) (Aircraft) to redesignate the existing paragraph (b)(2) authorization text as new paragraph (b)(2)(i), including adding the term transferred (in-country) for clarity. This final rule also adds a new paragraph (b)(2)(ii) that will authorize exports, reexports, and transfers (in-country) to any destination identified in Country Group A:2 and supplement no. 3 to part 746 of ECCNs 7A101, 7A102, or 7A103 when the commodities are for use in or for the “production” of civil manned aircraft. For commodities controlled for MT reasons, these three ECCNs are the subject of some of the most common license applications that BIS reviews and the specific end uses involving the use of these commodities in civil manned aircraft and for the “production” of civil manned aircraft are the most common end uses specified in these licenses. Provided these licenses do not involve a part 744 prohibited end use or end user concern or a destination of missile technology concern identified under Country Group D:4 or subject to a U.S. arms embargo identified under Country Group D:5, these types of license applications are regularly approved. Accordingly,

creation of a license exception authorization under new paragraph (b)(2)(ii) to authorize these exports, reexports, and transfers (in-country), provided the terms and conditions of the authorization are met and the general restrictions under § 740.2 are not otherwise applicable, is warranted. As an additional safeguard, this final rule limits the country scope of this new authorization to only destinations that are identified in Country Group A:2 and supplement no. 3 to part 746.

### **Savings Clause**

For the changes being made in this final rule, shipments of items removed from eligibility for a License Exception or export, reexport, or transfer (in-country) without a license (NLR) as a result of this regulatory action that were en route aboard a carrier to a port of export, reexport, or transfer (in-country), on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER], pursuant to actual orders for export, reexport, or transfer (in-country) to or within a foreign destination, may proceed to that destination under the previous eligibility for a License Exception or export, reexport, or transfer (in-country) without a license (NLR), provided the export, reexport, or transfer (in-country) is completed no later than on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

### **Export Control Reform Act of 2018**

On August 13, 2018, the President signed into law the John S. McCain National Defense Authorization Act for Fiscal Year 2019, which included the Export Control Reform Act of 2018 (ECRA) (codified, as amended, at 50 U.S.C. Sections 4801–4852). ECRA provides the legal basis for BIS’s principal authorities and serves as the authority under which BIS issues this rule. To the extent it applies to certain activities that are the subject of this rule, the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA) (codified, as amended, at 22 U.S.C. Sections 7201-7211) also serves as authority for this rule.

### **Rulemaking Requirements**

1. BIS has examined the impact of this rule as required by Executive Orders 12866, 13563, and 14094, which direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public, health, and safety effects, distributive impacts, and equity). This rule is considered a “significant regulatory action” under section 3(f) of Executive Order 12866.

2. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) (PRA), unless that collection of information displays a currently valid Office of Management and Budget (OMB) Control Number.

This rule involves the following OMB-approved collections of information subject to the PRA:

- 0694-0088, “Multi-Purpose Application,” which carries a burden hour estimate of 29.4 minutes for a manual or electronic submission;
- 0694-0096 “Five Year Records Retention Period,” which carries a burden hour estimate of less than 1 minute;
- 0694-0122, “Licensing Responsibilities and Enforcement;” and
- 0607-0152 “Automated Export System (AES) Program,” which carries a burden hour estimate of 3 minutes per electronic submission.

BIS expects the burden hours associated with these collection to decrease slightly by 221 hours for an estimated cost decrease of \$7,735, which is within the estimated burdens and costs of these collections. Additional information regarding these collections of information – including all background materials -- can be found at <https://www.reginfo.gov/public/do/PRAMain> by using the search function to enter either the title of the collection or the OMB Control Number.

3. This rule does not contain policies with federalism implications as that term is defined in Executive Order 13132.

4. Pursuant to section 1762 of ECRA (50 U.S.C. 4821), this action is exempt from the Administrative Procedure Act (APA) (5 U.S.C. 553) requirements for notice of proposed rulemaking, opportunity for public participation, and delay in effective date. While section 1762 of ECRA provides sufficient authority for such an exemption, this action is also independently exempt from these APA requirements because it involves a military or foreign affairs function of the United States (5 U.S.C. 553(a)(1)).

5. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule by 5 U.S.C. 553, or by any other law, the analytical requirements of the Regulatory Flexibility Act, 5 U.S.C. 601, et seq., are not applicable. Accordingly, no regulatory flexibility analysis is required, and none has been prepared.

## **List of Subjects**

### **15 CFR Part 740**

Administrative practice and procedure, Exports, Reporting and recordkeeping requirements.

### **15 CFR Part 774**

Exports, Reporting and recordkeeping requirements.

For the reasons stated in the preamble, parts 740 and 774 of the Export Administration Regulations (15 CFR parts 730 through 774) are amended as follows:

## **PART 740 – LICENSE EXCEPTIONS**

1. The authority citation for part 740 continues to read as follows:



**Authority:** 50 U.S.C. 4801-4852; 50 U.S.C. 4601 *et seq.*; 50 U.S.C. 1701 *et seq.*; 22 U.S.C. 7201 *et seq.*; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

2. Section 740.2 is amended by revising paragraph (a)(5), to read as follows:

**§ 740.2 Restrictions on all License Exceptions.**

(a) \* \* \*

(5)(i) The item is controlled for missile technology (MT) reasons. Only the following license exceptions may be used to export MT-controlled items to destinations other than those identified in Country Groups D:4 or D:5 (see supplement no. 1 to part 740 of the EAR):

(A) License Exception TMP (§ 740.9(a)(1), (a)(3) through (8), and (a)(10), (b)(1) through (b)(3), and Notes 2, 3, and 4 to paragraph (b) of the EAR);

(B) License Exception RPL (§ 740.10 of the EAR);

(C) License Exception GOV (§ 740.11(b)(2) of the EAR);

(D) License Exception TSU (§ 740.13(a) through (c), and (g) of the EAR);

(E) License Exception AVS (§ 740.15(b)(1) through (b)(4), (c)(1), (2), (e), and (f) of the EAR); *and*

(F) License Exception APR for (§ 740.16(c) through (f) of the EAR).

(ii) The item is controlled for missile technology (MT) reasons. Only the following license exceptions may be used to export MT-controlled items described in paragraphs (a)(5)(ii)(A) and (B) of this section to destinations identified in Country Groups D:4 or D:5 (see supplement no. 1 to part 740 of the EAR), provided the terms and conditions in parts 740 and 746 as applicable are met:

(A) MT-controlled items described in ECCNs 6A008, 7A001, 7A002, 7A004, 7A101, 7A102, 7A103, 7A104, 7A105, 7B001, 7D001, 7D002, 7D003, 7D101, 7D102, 7E003, 7E101 or 9A515, may be exported, reexported, or transferred (in-country) as part of a spacecraft, manned aircraft, land vehicle or marine vehicle or in quantities appropriate for replacement parts for such

applications under § 740.9(a)(4) (License Exception TMP for kits consisting of replacement parts), § 740.10 (License Exception RPL), § 740.13 (License Exception TSU), or § 740.15(b) (License Exception AVS for equipment and spare parts for permanent use on a vessel, aircraft or spacecraft, excluding paragraph (b)(2)(ii)), *and*

(B) MT-controlled commodities described in ECCNs 2A001 or 2A101 may be exported, reexported, or transferred (in-country) under § 740.9(a)(4) (License Exception TMP) or § 740.10 (License Exception RPL) as one-for-one replacement for equipment previously legally exported, reexported, or transferred (in-country).

3. Section 740.9 is amended by:

- a. Adding a sentence at the end of paragraph (a) introductory text;
- b. Revising the first sentence of paragraph (a)(1);
- c. Adding a sentence at the end of paragraph (b) introductory text; and
- d. Revising paragraphs (b)(1)(i) and (b)(2)(ii)(C).

The additions and revisions read as follows:

**§ 740.9 Temporary imports, exports, reexports, and transfers (in-country) (TMP).**

\* \* \* \* \*

(a) \* \* \* This paragraph (a) does not authorize any export, reexport, or transfer (in-country) of a commodity controlled under ECCN 9A012 that is “capable of” delivering at least 500 kilograms payload to a range of at least 300 kilometers.

(1) \* \* \* Exports, reexports, or transfers (in-country) of commodities and software as tools of trade for use by the exporter or employees of the exporter may be made only to destinations other than Country Group E:1 and for MT controlled commodities or software may be made only to destinations other than Country Groups D:4 and D:5. \* \* \*

\*\*\*\*\*

(b) \* \* \* This paragraph (b) does not authorize any export, reexport, or transfer (in-country) of a commodity controlled under ECCN 9A012 that is “capable of” delivering at least 500 kilograms payload to a range of at least 300 kilometers.

(1) \* \* \*

(i) Items controlled for national security (NS) reasons, nuclear proliferation (NP) reasons, chemical and biological weapons (CB), or missile technology reasons (MT) reasons may not be exported to Country Group D:1, D:2, D:3, or D:4 (see supplement no. 1 to part 740), respectively, under this paragraph (b)(1).

\* \* \*

(2) \* \* \*

(ii) \* \* \*

(C) Exports to Country Groups D:1, D:2, D:3, or D:4 (see supplement no. 1 to part 740) of items controlled for national security (NS) reasons, nuclear nonproliferation (NP) reasons, chemical and biological weapons (CB) reasons, or missile technology (MT) reasons, respectively.

\* \* \* \* \*

4. Section 740.11 is amended by adding one sentence to the end of the introductory text to read as follows:

**§ 740.11 Governments, international organizations, international inspections under the Chemical Weapons Convention, and the International Space Station (GOV).**

\* \* \* Items controlled for missile technology (MT) reasons are eligible only for transactions described in paragraphs (b)(2) of this section.

\* \* \* \* \*

5. Section 740.13 is amended by adding a sentence at the end of paragraph (d)(2), to read as follows:

**§ 740.13 Technology and software—unrestricted (TSU).**

\* \* \* \* \*

(d) \* \* \*

(2) \* \* \* The provisions of this paragraph (d) are also not available for any software that is controlled for missile technology (MT) reasons.

\* \* \* \* \*

6. Section 740.15 is amended by revising paragraph (b)(2), to read as follows:

**§ 740.15 Aircraft, vessels and spacecraft (AVS).**

\* \* \* \* \*

(b) \* \* \*

(2) *Aircraft.* (i) Equipment and spare parts, for permanent use on an aircraft, when necessary for the proper operation of such aircraft, may be exported or reexported for use on board an aircraft of any registry, except an aircraft registered in, owned or controlled by, or under charter or lease to a country included in Country Group D:1, Cuba, or a national of any of these countries.

(ii) This paragraph (b)(2)(ii) authorizes exports, reexports, and transfers (in-country) to any country that is identified in Country Group A:2 and supplement no. 3 to part 746 of ECCNs 7A101 through 7A103 when the commodities are for use in or for the “production” of civil manned aircraft.

\* \* \* \* \*

**PART 774 - THE COMMERCE CONTROL LIST**

7. The authority citation for part 774 continues to read as follows:

**Authority:** 50 U.S.C. 4801-4852; 50 U.S.C. 4601 *et seq.*; 50 U.S.C. 1701 *et seq.*; 10 U.S.C. 8720; 10 U.S.C. 8730(e); 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.*; 22 U.S.C. 6004; 42 U.S.C. 2139a; 15 U.S.C. 1824; 50 U.S.C. 4305; 22 U.S.C. 7201 *et seq.*; 22 U.S.C. 7210; E.O.

13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783.

8. Supplement no. 1 to part 774 is amended by revising ECCNs 1C111, 2A101, 2B119, 6A107, 9A101, and 9E515, to read as follows:

**Supplement No. 1 to Part 774—The Commerce Control List**

\* \* \* \* \*

**1C111 Propellants and constituent chemicals for propellants, other than those specified in 1C011, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* MT, NP, RS, AT

<b>Control(s)</b>	<b>Country chart (see Supp. No. 1 to part 738)</b>
MT applies to entire entry	MT Column 1
NP applies to 1C111.a.3.f only	NP Column 1
RS applies to 1C111.d.3 only	RS Column 1
AT applies to entire entry	AT Column 1

**List Based License Exceptions** (See Part 740 for a Description of All License Exceptions)

*LVS:* N/A

*GBS:* N/A

**List of Items Controlled**

*Related Controls:* (1) See USML Category V(e)(7) for controls on HTPB (hydroxyl terminated polybutadiene) with a hydroxyl functionality equal to or greater than 2.2 and less than or equal to 2.4, a hydroxyl value of less than 0.77 meq/g, and a viscosity at 30 °C of less than 47 poise (CAS # 69102–90–5). (2) See USML Category V for controls on ferrocene derivatives, including butacene. (3) See ECCN 1C608 for controls on oxidizers that are composed of fluorine and also

other halogens, oxygen, or nitrogen, except for chlorine trifluoride, which is controlled under this ECCN 1C111.a.3.f. (4) See ECCN 1C011.b for controls on boron and boron alloys not controlled under this ECCN 1C111.a.2.b. (5) See USML Category V for controls on Inhibited Red Fuming Nitric Acid (IRFNA) (CAS 8007–58–7).

*Related Definitions:* Particle size is the mean particle diameter on a weight or volume basis. Best industrial practices must be used in sampling, and in determining particle size, and the controls may not be undermined by the addition of larger or smaller sized material to shift the mean diameter.

*Items:*

a. Propulsive substances:

a.1. Spherical or spheroidal aluminum powder (C.A.S. 7429–90–5) in particle size of less than  $200 \times 10^{-6}$  m (200  $\mu$ m) and an aluminum content of 97% by weight or more, if at least 10% of the total weight is made up of particles of less than 63  $\mu$ m, according to ISO 2591–1:1988 or national equivalents.

***Technical Note:*** A particle size of 63  $\mu$ m (ISO R–565) corresponds to 250 mesh (Tyler) or 230 mesh (ASTM standard E–11).

a.2. Metal powders and alloys where at least 90% of the total particles by particle volume or weight are made up of particles of less than 60  $\mu$  (determined by measurement techniques such as using a sieve, laser diffraction or optical scanning), whether spherical, atomized, spheroidal, flaked or ground, as follows:

a.2.a. Consisting of 97% by weight or more of any of the following:

a.2.a.1. Zirconium (C.A.S. #7440–67–7);

a.2.a.2. Beryllium (C.A.S. #7440–41–7); or

a.2.a.3. Magnesium (C.A.S. #7439–95–4);

a.2.b. Boron or boron alloys with a boron content of 85% or more by weight.

**Technical Note:** *The natural content of hafnium in the zirconium (typically 2% to 7%) is counted with the zirconium.*

**Note:** *In a multimodal particle distribution (e.g., mixtures of different grain sizes) in which one or more modes are controlled, the entire powder mixture is controlled.*

a.3. Oxidizer substances usable in liquid propellant rocket engines, as follows:

a.3.a. Dinitrogen trioxide (CAS 10544–73–7);

a.3.b. Nitrogen dioxide (CAS 10102–44–0)/dinitrogen tetroxide (CAS 10544–72–6);

a.3.c. Dinitrogen pentoxide (CAS 10102–03–1);

a.3.d. Mixed oxides of nitrogen (MON);

a.3.e. [Reserved];

a.3.f. Chlorine trifluoride (ClF<sub>3</sub>).

**Technical Note:** *Mixed oxides of nitrogen (MON) are solutions of nitric oxide (NO) in dinitrogen tetroxide/nitrogen dioxide (N<sub>2</sub>O<sub>4</sub>/NO<sub>2</sub>) that can be used in missile systems. There are a range of compositions that can be denoted as MON<sub>i</sub> or MON<sub>ij</sub>, where *i* and *j* are integers representing the percentage of nitric oxide in the mixture (e.g., MON<sub>3</sub> contains 3% nitric oxide, MON<sub>25</sub> 25% nitric oxide. An upper limit is MON<sub>40</sub>, 40% by weight).*

b. Polymeric substances:

b.1. Carboxy-terminated polybutadiene (including carboxyl-terminated polybutadiene) (CTPB);

b.2. Hydroxy-terminated polybutadiene (including hydroxyl-terminated polybutadiene) (HTPB) (CAS 69102–90–5), except for hydroxyl-terminated polybutadiene as specified in USML Category V (see 22 CFR 121.1) (also see Related Controls Note #1 for this ECCN);

b.3. Polybutadiene acrylic acid (PBAA);

b.4. Polybutadiene acrylic acid acrylonitrile (PBAN) (CAS 25265–19–4/CAS 68891–50–9);

b.5. Polytetrahydrofuran polyethylene glycol (TPEG).

**Technical Note:** *Polytetrahydrofuran polyethylene glycol (TPEG) is a block copolymer of poly 1,4-Butanediol (CAS 110–63–4) and polyethylene glycol (PEG) (CAS 25322–68–3).*

c. Other propellant energetic materials, additives, or agents:

c.1. [Reserved]

c.2. Triethylene glycol dinitrate (TEGDN);

c.3. 2 Nitrodiphenylamine (2-NDPA);

c.4. Trimethylolethane trinitrate (TMETN);

c.5. Diethylene glycol dinitrate (DEGDN).

d. Hydrazine and derivatives as follows:

d.1. Hydrazine (C.A.S. #302–01–2) in concentrations of 70% or more;

d.2. Monomethyl hydrazine (MMH) (C.A.S. #60–34–4);

d.3. Symmetrical dimethyl hydrazine (SDMH) (C.A.S. #540–73–8);

d.4. Unsymmetrical dimethyl hydrazine (UDMH) (C.A.S. #57–14–7);

d.5. Trimethylhydrazine (C.A.S. #1741–01–1);

d.6. Tetramethylhydrazine (C.A.S. #6415–12–9);

d.7. N,N diallylhydrazine (CAS 5164–11–4);

d.8. Allylhydrazine (C.A.S. #7422–78–8);

d.9. Ethylene dihydrazine (CAS 6068–98–0);

d.10. Monomethylhydrazine dinitrate;

d.11. Unsymmetrical dimethylhydrazine nitrate;

d.12. 1,1-Dimethylhydrazinium azide (CAS 227955–52–4)/1,2-Dimethylhydrazinium azide (CAS 299177–50–7);

d.13. Hydrazinium azide (C.A.S. #14546–44–2);

d.14. Hydrazinium dinitrate (CAS 13464–98–7);

d.15. Diimido oxalic acid dihydrazine (C.A.S. #3457–37–2);



- d.16. 2-hydroxyethylhydrazine nitrate (HEHN);
- d.17. Hydrazinium diperchlorate (C.A.S. #13812–39–0);
- d.18. Methylhydrazine nitrate (MHN) (CAS 29674–96–2);
- d.19. 1,1-Diethylhydrazine nitrate (DEHN)/1,2-Diethylhydrazine nitrate (DEHN) (CAS 363453–17–2);
- d.20. 3,6-dihydrazino tetrazine nitrate (DHTN), also referred to as 1,4-dihydrazine nitrate.

e. Hydrazine replacement fuels as follows:

- e.1. 2-Dimethylaminoethylazide (DMAZ) (CAS 86147-04-8);
- e.2. [Reserved]

\* \* \* \* \*

**2A101 Radial Ball Bearings Having all Tolerances Specified in Accordance With ISO 492 Tolerance Class 2 (or ANSI/ABMA Std 20 Tolerance Class ABEC-9 or Other National Equivalents), or Better and Having all of the Following Characteristics (see List of Items Controlled).**

#### **License Requirements**

*Reason for Control:* MT, AT

<b>Control(s)</b>	<b>Country Chart (See Supp. No. 1 to part 738)</b>
MT applies to entire entry	MT Column 1.
AT applies to entire entry	AT Column 1.

**List Based License Exceptions** (See Part 740 for a description of all license exceptions)

*LVS:* N/A

*GBS:* N/A

#### **List of Items Controlled**

*Related Controls:* See ECCN 2A001.

*Related Definitions:* N/A

*Items:*

- a. An inner ring bore diameter between 12 and 50 mm;
- b. An outer ring outside diameter between 25 and 100 mm; *and*
- c. A width between 10 and 20 mm.

\* \* \* \* \*

**2B119 Balancing machines and related equipment, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* MT, AT

Control(s)	Country Chart (See Supp. No. 1 to part 738)
MT applies to entire entry	MT Column 1
AT applies to entire entry	AT Column 1

**List Based License Exceptions** (See Part 740 for a description of all license exceptions)

*LVS:* N/A

*GBS:* N/A

**List of Items Controlled**

*Related Controls:* See also 7B101.

*Related Definitions:* N/A

*Items:*

- a. Balancing machines having all of the following characteristics:
  - a.1. Not capable of balancing rotors/assemblies having a mass greater than 3 kg;
  - a.2. Capable of balancing rotors/assemblies at speeds greater than 12,500 rpm;
  - a.3. Capable of correcting unbalance in two planes or more; and
  - a.4. Capable of balancing to a residual specific unbalance of 0.2 g mm per kg of rotor mass.

**Note:** 2B119.a. does not control balancing machines designed or modified for dental or other medical equipment.

b. Indicator heads designed or modified for use with machines specified in 2B119.a.

***Note:** Indicator heads are sometimes known as balancing instrumentation.*

\* \* \* \* \*

**6A107 Gravity meters (gravimeters) or gravity gradiometers, other than those controlled by 6A007, designed or modified for airborne or marine use, as follows, (see List of Items Controlled) and “specially designed” “parts” and “components” therefor.**

### **License Requirements**

*Reason for Control:* MT, AT

<b>Control(s)</b>	<b>Country chart (see Supp. No. 1 to part 738)</b>
MT applies to entire entry	MT Column 1
AT applies to entire entry	AT Column 1

**List Based License Exceptions** (See Part 740 for a Description of All License Exceptions)

*LVS:* N/A

*GBS:* N/A

### **List of Items Controlled**

*Related Controls:* See USML Category XII(d) for certain gravity meters (gravimeters) or gravity gradiometers subject to the ITAR. See also ECCN 7A611.

*Related Definitions:* 'Time to steady-state registration' (also referred to as the gravity meter's response time) is the time over which the disturbing effects of platform-induced acceleration (high frequency noise) are reduced.

*Items:*

a. Gravity meters having all of the following characteristics:

a.1. A static or operational accuracy equal to or less (better) than 0.7 milligal (mgal); *and*

a.2. A 'time to steady-state registration' of two minutes or less.

b. Gravity gradiometers

\* \* \* \* \*

**9A101 Turbojet and turbofan engines, other than those controlled by 9A001, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* MT, AT

<b>Control(s)</b>	<b>Country chart (see Supp. No. 1 to part 738)</b>
MT applies to entire entry	MT Column 1
AT applies to entire entry	AT Column 1

**List Based License Exceptions** (See Part 740 for a Description of All License Exceptions)

*LVS:* N/A

*GBS:* N/A

**List of Items Controlled**

*Related Controls:* 9A101.b controls only engines for non-military unmanned aerial vehicles [UAVs] or remotely piloted vehicles [RPVs], and does not control other engines designed or modified for use in “missiles”, which are “subject to the ITAR” (see 22 CFR parts 120 through 130).

*Related Definitions:* N/A

*Items:*

a. Engines having all of the following characteristics:

a.1. 'Maximum thrust value' greater than 400 N (achieved un-installed) excluding civil certified engines with a maximum thrust value greater than 8,890 N (achieved un-installed);

a.2. Specific fuel consumption of 0.15 kg N<sup>-1</sup> h<sup>-1</sup> or less;

a.3. 'Dry weight' less than 750 kg; *and*

a.4. 'First –stage rotor diameter' less than 1 m; *or*

***Technical Notes:***

1. 'Maximum thrust value' in 9A101.a.1 is the manufacturer's demonstrated maximum thrust for the engine type un-installed at sea level static conditions using the ICAO standard atmosphere. The civil type certified thrust value will be equal to or less than the manufacturer's demonstrated maximum thrust for the engine type.

2. Specific fuel consumption is determined at maximum continuous thrust for engine type un-installed at sea level static conditions using the ICAO standard atmosphere.

3. 'Dry weight' is the weight of the engine without fluids (fuel, hydraulic fluid, oil, etc.) and does not include the nacelle (housing).

4. 'First-stage rotor diameter' is the diameter of the first rotating stage of the engine, whether a fan or compressor, measured at the leading edge of the blade tips.

b. Engines designed or modified for use in “missiles” or UAVs with a range equal to or greater than 300 km, regardless of thrust, specific fuel consumption, 'dry weight' or 'first-stage rotor diameter'.

\* \* \* \* \*

**9E515 “Technology” “required” for the “development,” “production,” operation, installation, repair, overhaul, or refurbishing of “spacecraft” and related commodities, as follows (see List of Items Controlled).**

#### **License Requirements**

*Reason for Control:* NS, MT, RS, AT

<b>Control(s)</b>	<b>Country chart (see Supp. No. 1 to part 738)</b>
NS applies to entire entry except 9E515.y	NS Column 1.
MT applies to technology for items in 9A515.d, 9A515.e.2, 9A515.h, and 9B515.a controlled for MT reasons	MT Column 1.

Control(s)	Country chart (see Supp. No. 1 to part 738)
RS applies to entire entry except 9E515.y	RS Column 1.
RS applies to 9E515.y, except to Russia for use in, with, or for the International Space Station (ISS), including launch to the ISS	China, Russia, or Venezuela (see § 742.6(a)(7)).
AT applies to entire entry	AT Column 1.

**License Requirement Note:** *The Commerce Country Chart is not used for determining license requirements for “technology” classified ECCN 9E515.f. See § 742.6(a)(9), which specifies that such “technology” is subject to a worldwide license requirement.*

**List Based License Exceptions** (See Part 740 for a Description of All License Exceptions)

TSR: N/A

**Special Conditions for STA**

STA: (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for ECCN 9E515.b, .d, .e, or .f unless determined by BIS to be eligible for License Exception STA in accordance with § 740.20(g) (License Exception STA eligibility requests for certain 9x515 and “600 series” items). (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “technology” in 9E515.

**List of Items Controlled**

*Related Controls:* Technical data directly related to articles enumerated in USML Category XV are subject to the control of USML paragraph XV(f). See also ECCNs 3E001, 3E003, 6E001, and 6E002 for specific “space-qualified” items. See ECCNs 9E001 and 9E002 for technology for the International Space Station, the James Webb Space Telescope (JWST) and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor. See USML

category XV(f) for controls on technical data and defense services related to launch vehicle integration.

*Related Definitions:* N/A

*Items:*

- a. “Technology” “required” for the “development,” “production,” installation, repair (including on-orbit anomaly resolution and analysis beyond established procedures), overhaul, or refurbishing of commodities controlled by ECCN 9A515 (except 9A515.a.1, .a.2, .a.3, .a.4, .b, .d, .e, or .g), ECCN 9B515, or “software” controlled by ECCN 9D515.a.
- b. “Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of software controlled by ECCN 9D515.b.
- c. [Reserved]
- d. “Technology” “required” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.d.
- e. “Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.e.
- f. “Technology” “required” for the “development,” “production,” installation, repair (including on-orbit anomaly resolution and analysis beyond established procedures), overhaul, or refurbishing of commodities controlled by ECCN 9A515.a.1, .a.2, .a.3, .a.4, or .g.
- g. through x. [Reserved]
- y. Specific “technology” “required” for the “production,” “development,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software enumerated in ECCN 9A515.y or 9D515.y.

**Note 1:** [Reserved]

**Note 2:** *Activities and technology/technical data directly related to or required for the spaceflight (e.g., sub-orbital, orbital, lunar, interplanetary, or otherwise beyond Earth orbit) passenger or participant experience, regardless of whether the passenger or participant*

*experience is for space tourism, scientific or commercial research, commercial manufacturing/production activities, educational, media, or commercial transportation purposes, are not subject to the ITAR or the EAR. Such activities and technology/technical data include those directly related to or required for:*

*(i) “Spacecraft” access, ingress, and egress, including the operation of all “spacecraft” doors, hatches, and airlocks;*

*(ii) Physiological training (e.g., human-rated centrifuge training or parabolic flights, pressure suit or spacesuit training/operation);*

*(iii) Medical evaluation or assessment of the spaceflight passenger or participant;*

*(iv) Training for and operation by the passenger or participant of health and safety related hardware (e.g., seating, environmental control and life support, hygiene facilities, food preparation, exercise equipment, fire suppression, communications equipment, safety-related clothing or headgear) or emergency procedures;*

*(v) Viewing of the interior and exterior of the spacecraft or terrestrial mock-ups;*

*(vi) Observing “spacecraft” operations (e.g., pre-flight checks, landing, in-flight status);*

*(vii) Training in “spacecraft” or terrestrial mock-ups for connecting to or operating passenger or participant equipment used for purposes other than operating the “spacecraft”; or*

*(viii) Donning, wearing or utilizing the passenger's or participant's flight suit, pressure suit or spacesuit, and personal equipment.*

*\* \* \* \* \**

**Thea D. Rozman Kendler,**

*Assistant Secretary for Export Administration.*